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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,976	04/20/2005	Funda Sahin Nomaler	NL 021062	5805

24737 7590 01/23/2006

PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER	
PRESTON, ERIK D	

ART UNIT	PAPER NUMBER
2834	

DATE MAILED: 01/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/531,976	SAHIN NOMALER, FUNDA	
	Examiner	Art Unit	
	Erik D. Preston	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 April 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 4/20/05 is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4/20/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

Figures 1A & 1B should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Regarding claim 2, the phrase "preferably" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1,2 & 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Izawa et al. (US 6075297) in view of Jack et al. (IEEE Transactions on Industry Applications, Vol. 36, No. 4, July/August 2000, Pages 1077-1084. Supplied by Applicant).

With respect to claim 1, Izawa teaches a linear electric motor comprising a movable part consisting of a magnetic core (Fig. 6B, #24) which supports a set of electrically conductive turns (Fig. 6B, #2), said movable part is slidably supported by a rail which is provided with at least one set of permanent magnets (Fig. 6B, #12A-C), distributed in a longitudinal direction along the core's periphery, which magnets produce magnetic fields that cooperate with the set of turns via an air-gap, characterized in that said electrically conductive turns are wound around the periphery of the core substantially perpendicular to the central line thereof, and in that at least two sets of permanent magnets are arranged along said periphery in a longitudinal direction such that the at least two sets of magnets are arranged at different angles to said core (as seen in Fig. 6B), but it does not specifically teach said magnetic core being made of soft-magnetic composite material. However, Jack teaches magnetic cores for motors being formed of soft-magnetic composite material (Col. 2, Paragraphs 1-5). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the core of Izawa in view of the soft-magnetic composite material as taught by Jack because it provides far superior performance to a conventionally laminated motor (Jack, Col. 2, Paragraphs 1-5).

With respect to claim 2, Izawa in view of Jack teaches the motor of claim 1, and Izawa teaches that the cross-section of said core of soft-magnetic composite material has a square shape, and that the sets of permanent magnets are positioned along three sides thereof (as seen in Fig. 6B).

With respect to claim 6, Izawa in view of Jack teaches the motor of claim 1, and Izawa teaches that said core is provided with circumferential slots (as seen in 6A & B, there are slots between groups of windings) in which said turns can be located. This claim makes no positive recitation of the turns being located in the slots, only that they could be located in the slots.

Claims 1 & 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uzuka (JP 07-710170) in view of Jack et al. (IEEE Transactions on Industry Applications, Vol. 36, No. 4, July/August 2000, Pages 1077-1084. Supplied by Applicant).

With respect to claim 1, Uzuka teaches a linear electric motor comprising a movable part consisting of a core (Fig. 2, #23) which supports a set of electrically conductive turns (Fig. 2, #24b), said movable part is slidably supported by a rail which is provided with at least one set of permanent magnets (Fig. 2, #22), distributed in a longitudinal direction along the core's periphery, which magnets produce magnetic fields that cooperate with the set of turns via an air-gap, characterized in that said electrically conductive turns are wound around the periphery of the core substantially perpendicular to the central line thereof, and in that at least two sets of permanent magnets are arranged along said periphery in a longitudinal direction such that the at least two sets

of magnets are arranged at different angles to said core (as seen in Fig. 6B), but it does not specifically teach said magnetic core being made of soft-magnetic composite material. However, Jack teaches magnetic cores for motors being formed of soft-magnetic composite material (Col. 2, Paragraphs 1-5). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the core of Uzuka in view of the soft-magnetic composite material as taught by Jack because it provides far superior performance to a conventionally laminated motor (Jack, Col. 2, Paragraphs 1-5).

With respect to claim 3, Uzuka in view of Jack teaches the motor of claim 1, and Uzuka teaches that the cross section of said core of the soft-magnetic composite material has a substantially circular shape, and said set of permanent magnets is formed by ring magnets which surround a substantial portion of the circumference of the core as viewed in a transverse direction (as seen in Fig. 2).

Claims 4 & 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Izawa et al. (US 6075297) in view of Jack et al. (IEEE Transactions on Industry Applications, Vol. 36, No. 4, July/August 2000, Pages 1077-1084. Supplied by Applicant) further in view of Hwang et al. (US 6528907). Izawa in view of Jack teaches the motor of claim 1, but it does not teach that said rail is provided with a cooling means, which extends in the longitudinal direction of the rail, and in heat-exchanging contact with said core and turns over part of their surface, or that said core is provided with internal cooling channels. However, Hwang teaches a linear motor with coils that are provided with a cooling means (as seen in Fig. 8), which extends in the longitudinal

direction, and in heat-exchanging contact with a core and turns over part of their surface wherein said core is provided with internal cooling channels (Fig. 8, #7). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the core of Izawa in view of the cooling means as taught by Hwang because it provides an improved cooling effect (Hwang, Abstract).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 4864170, US 5270593, US 6163091, US 2001/0043016, US 2003/0102723 & US 2005/0231044

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erik D. Preston whose telephone number is (571)272-8393. The examiner can normally be reached on Monday through Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571)272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

01/09/2006

DARREN SCHUBERG
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